

Lesson 7-2 Divisions of the Nervous System

Goal: to identify the 2 divisions of the nervous system
central and peripheral

to describe the structures and functions of the central nervous system

structure - brain and spinal cord

function - controls all functions of body

carries messages back and forth to peripheral nerves

to describe the structures and functions of the peripheral nervous system

structure - network of nerves that branch out from the central nervous system

function - connects rest of body to central nervous system

involved in voluntary (somatic) and involuntary (autonomic) actions

to identify 2 ways in which the nervous system can be injured
concussion or spinal cord injury

brain is the control center of body
brain has 3 parts: brain stem, cerebrum, cerebellum
skull, fluid, and connective tissue protect it

brain stem - connects brain and spinal cord
control flow of information between brain and body
controls involuntary actions
(breathing, heartbeat, temperature)

cerebrum - front of brain
largest part
interprets input from senses (sight, hearing)
controls movement (skeletal muscles)
carries out complex mental processes
(abstract thought, learning, memory)
2 halves (left controls right side of body, math, logic)
(right controls left, creativity, language)

cerebellum - back of brain
coordinates muscle action
helps keep physical balance

spinal cord - connects brain and peripheral nerves
protected by spinal column (spine), fluid, connective
tissue

peripheral nervous system - network of nerves
outside central nervous system
connect rest of body to central nervous system
43 pairs of nerves (left and right side of body)
12 start at brain
31 start at spinal cord

spinal nerves - contain axons of sensory (body to CNS)
and motor (CNS to body)
top control neck/arms, bottom control legs

2 groups of nerves:

- somatic - voluntary actions

- autonomic - involuntary actions

spinal cord cut or crushed often leads to paralysis because
impulses are impaired or stopped